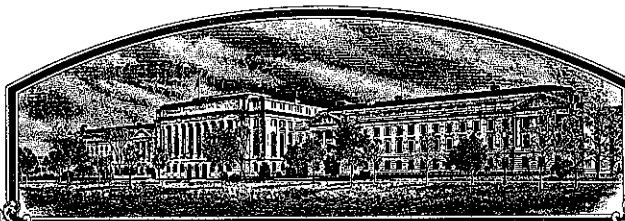


No.

9200278



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

JJR Cooperative

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'FFR 525W'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-ninth day of March in the year of our Lord one thousand nine hundred and ninety-six.

Attest:

Marsha A. Stanton

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Samuel J. Hittman
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) FFR COOPERATIVE		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. 82-52-52		3. VARIETY NAME FFR 525W	
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) P.O. Box 322 Battle Ground, IN 47920		5. PHONE (include area code) 317/567-2115		FOR OFFICIAL USE ONLY PVPO NUMBER 9200278	
6. GENUS AND SPECIES NAME Triticum aestivum		7. FAMILY NAME (Botanical) Gramineae		F I L I N G Date September 28, 1992 Time 12:32 <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M.	
8. CROP KIND NAME (Common Name) Wheat, Common		9. DATE OF DETERMINATION September 1, 1989		F E E S Filing and Examination Fee: \$2150.- Date Sept. 25, 1992	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation		11. IF INCORPORATED, GIVE STATE OF INCORPORATION Wisconsin		R E C E I V E D Certificate Fee: \$ 300.00 Date 2-21-96	
12. DATE OF INCORPORATION 1960		13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Frank Spelbring FFR COOPERATIVE P.O. Box 322 Battle Ground, IN 47920 317/567-2115 PHONE (include area code):			

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

a. ☒ Exhibit A, Origin and Breeding History of the Variety.

b. ☒ Exhibit B, Novelty Statement.

c. ☒ Exhibit C, Objective Description of Variety.

d. ☒ Exhibit D, Additional Description of Variety.

e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.

f. ☒ Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office _____

g. ☒ Filing and Examination Fee (\$2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act.)
☐ YES (If "YES," answer items 16 and 17 below) ☒ NO (If "NO," skip to item 18 below)

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.
☐ YES (If "YES," through ☐ Plant Variety Protection Act ☐ Patent Act. Give date: _____)
☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☒ YES (If "YES," give names of countries and dates) US, September 30, 1991
☐ NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

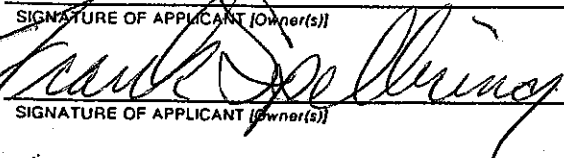
SIGNATURE OF APPLICANT (owner(s)) 	CAPACITY OR TITLE Vice President, Marketing	DATE September 18, 1992
SIGNATURE OF APPLICANT (owner(s))	CAPACITY OR TITLE	DATE

Exhibit A. Origin and Breeding History

Using a modified bulk breeding system, FFR 525W was selected in the F₅ generation from the cross of Coker 68-15 x VA71-54-21. VA71-54-21 was a selection from the cross of Taylor *2//Norin10/Brevor/3/? (Pollen parent in greenhouse cross was not recorded). Individual plant selections were made for acceptable agronomic characters such as height, maturity and resistance to diseases present in the F₅ nursery.

FFR 525W was entry 52 in the 1982 preliminary yield trial and was tested under the designation VA82-52-52. Data from early trials showed good yielding ability, but poor resistance to powdery mildew strains common to Virginia. When an agreement to make varieties available to FFR Cooperative was arranged in 1986, VA82-52-52 was sent to FFR for evaluation.

FFR entered VA82-52-52 into company run trials in 1986 and began a small increase (25' x 100') that was rogued for visual deviants and harvested in 1987. A one acre increase was harvested the following summer in Indiana with several deviant tall plants being rogued from the increase. For the 1989 harvest, a 20 acre field was grown in Tennessee, while a small increase was grown in Indiana for further roguing and purification. Seed from the 20 acre field was further increased for field evaluation in 1990 and market introduction in 1991. At the same time, Breeder seed increases have been grown and rogued in Indiana each year. Since 1989, the variety has appeared uniform and stable.

Roguing over years has nearly eliminated the tall variant plant that persisted, however it still exists at a low frequency. This variant and others for head type do not exceed 1.5% of the population.

Exhibit B. Novelty Statement

FFR 525W is similar to the variety Wakefield, but differs in that Wakefield has purple coleoptiles while FFR 525W has white coleoptiles.

11. HEAD:

☐ 1 Density: 1 = LAX 2 = DENSE

☐ 1 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE
4 = OTHER (Specify) _____

☐ 3 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

☐ Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED
5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____

☐ 0 ☐ 7 CM. LENGTH

☐ 1 ☐ 0 MM. WIDTH

12. GLUMES AT MATURITY:

☐ 2 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.)
3 = LONG (CA. 9 mm.)

☐ 2 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)
3 = WIDE (CA. 4 mm.)

☐ 4 Shoulder: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED
shape: 4 = SQUARE 5 = ELEVATED 6 = APICULATE

☐ 2 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

☐ 1 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

☐ 1 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

☐ 2 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

☐ 1 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

☐ 1 Check: 1 = ROUNDED 2 = ANGULAR

☐ 2 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG

☐ 1 Brush: 1 = NOT COLLARED 2 = COLLARED

☐ Phenol reaction 1 = IVORY 2 = FAWN 3 = LT. BROWN
(See instructions): 4 = BROWN 5 = BLACK

☐ 3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

☐ 0 ☐ 6 MM. LENGTH

☐ 0 ☐ 3 MM. WIDTH

☐ 3 ☐ 6 GM. PER 1000 SEEDS

17. SEED CREASE:

☐ 2 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'
2 = 80% OR LESS OF KERNEL 'CHRIS'
3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

☐ 0 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'
2 = 35% OR LESS OF KERNEL 'CHRIS'
3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ STEM RUST
(Races) _____

☐ LEAF RUST
(Races) _____

☐ 0 See supporting data attached
STRIPE RUST (Races) _____ ☐ 0 LOOSE SMUT

☐ POWDERY MILDEW

☐ 0 BUNT

☐ OTHER (Specify) _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 SAWFLY

☐ 0 APHID (Bydv.)

☐ GREEN BUG

☐ CEREAL LEAF BEETLE

☐ OTHER (Specify) _____ HESSIAN FLY
RACES: _____

☐ GP

☐ A

☐ B

☐ C

☐ D

☐ E

☐ F

☐ G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering		Seed size	
Leaf size		Seed shape	
Leaf color		Coleoptile elongation	
Leaf carriage		Seedling pigmentation	

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.W. Briggie and L. P. Reitz, 1963; Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

Exhibit D. Additional Description

FFR 525W is a high yielding wheat variety well adapted to mid and deep south environments east of the appalachian chain. It is a beardless variety exhibiting large heads, medium sized kernels and excellent test weights. It is medium-early in maturity, approximately two days earlier than Wakefield. FFR 525W is slightly shorter than Wakefield and has displayed excellent standability throughout the adapted region. Its good height and short awns makes it well suited to straw baling after harvest.

FFR 525W has exhibited good levels of winterhardiness, Similar to Caldwell and Wakefield. It has moderate levels of resistance to many prevalent diseases including Septoria, leaf and stem rusts and powdery mildew strains found the the mid-south. FFR 525W should be planted after the fly-free date at normal seeding rates. It is not recommended for the wet soils found in south central Louisiana.

Roguing over years has nearly eliminated off-type plants that persisted, however a tall plant still exists at a low frequency. This deviant and others for head type do not exceed 1.5% of the population.

RECEIVED
JAN 10 1968
U.S. DEPT. OF AGRICULTURE
WASHINGTON, D.C.

FFR COOPERATIVE
Wheat Testing Locations

City	State
-----	-----
Attica	OH
Barclay	MD
Delphos	OH
Flora	IL
Fremont	NC
Greensburg	IN
Greensburg	OH
Jackson	TN
Lafayette	IN
Providence Forge	VA
Springfield	OH
Stoneville	MS
Union City	TN
Windfall	IN

9/14/92 (pvp525.txt)

FFR COOPERATIVE

Wheat Varieties Head-to-Head Comparison for MATURITY (1 = early; 9 = late)

Variety	Test	IN Laf	MS Sto	NC Fre	TN Jac	VA Pro	-Summary- #	AVG
	1988							
CALDWELL		2.0	--	--	--	--	1	2.0
FFR 525W		2.7	--	--	--	--	1	2.7
WAKEFIELD		4.7	--	--	--	--	1	4.7
	1989							
CALDWELL		3.3	--	--	3.0	5.3	3	3.9
FFR 525W		4.0	--	--	1.0	2.0	3	2.3
WAKEFIELD		5.7	--	--	3.0	4.7	3	4.5
	1990							
CALDWELL		3.7	--	--	--	3.3	2	3.5
FFR 525W		2.0	--	--	--	1.7	2	1.9
WAKEFIELD		4.0	--	--	--	3.0	2	3.5
	1991							
CALDWELL		5.0	9.0	7.7	8.3	5.0	5	7.0
FFR 525W		3.7	3.0	1.7	6.7	4.7	5	4.0
WAKEFIELD		5.7	5.3	3.0	5.3	3.7	5	4.6
	1992							
CALDWELL		--	8.0	2.7	6.3	6.0	4	5.8
FFR 525W		--	5.3	2.3	4.7	2.3	4	3.7
WAKEFIELD		--	8.0	1.7	8.0	4.7	4	5.6

Column Summaries Per Variety

	IN Laf	MS Sto	NC Fre	TN Jac	VA Pro	-Summary- #	AVG
CALDWELL	3.5	8.5	5.2	5.9	4.9	15	5.2
FFR 525W	3.1	4.2	2.0	4.1	2.7	15	3.2
WAKEFIELD	5.0	6.7	2.4	5.4	4.0	15	4.7

FFR COOPERATIVE

Wheat Varieties Head-to-Head Comparison for LODGING (1 = erect; 5 = lodged)

Variety	Test 1988	IL Flo	IN Laf	Win	MD Bar	MS Sto	NC Fre	OH Del	Spr	TN Jac	Uni	VA Pro	-Summary- # AVG
CALDWELL		--	--	2.7	3.0	--	--	--	--	1.0	--	4.0	4 2.7
FFR 525W		--	--	2.7	3.3	--	--	--	--	4.0	--	3.0	4 3.3
WAKEFIELD		--	--	3.0	2.7	--	--	--	--	2.7	--	1.7	4 2.5
	1989	--	2.3	--	3.3	--	--	--	--	--	2.3	7.3	4 3.8
CALDWELL		--	2.3	--	2.7	--	--	--	--	--	2.7	6.3	4 3.5
FFR 525W		--	3.0	--	6.0	--	--	--	--	--	2.3	5.3	4 4.2
WAKEFIELD		--											
	1990	2.3	--	--	--	--	--	1.7	3.3	1.0	--	--	4 2.1
CALDWELL		4.7	--	--	--	--	--	2.3	3.3	1.7	--	--	4 3.0
FFR 525W		3.3	--	--	--	--	--	1.0	2.3	1.0	--	--	4 1.9
WAKEFIELD													
	1991	1.7	--	--	--	2.0	4.0	--	--	1.3	--	3.3	5 2.5
CALDWELL		2.3	--	--	--	1.7	4.3	--	--	3.3	--	2.7	5 2.9
FFR 525W		1.3	--	--	--	2.3	2.6	--	--	1.0	--	2.0	5 1.9
WAKEFIELD													
	1992	--	--	--	--	--	2.0	--	--	--	--	1.3	2 1.7
CALDWELL		--	--	--	--	--	2.0	--	--	--	--	1.0	2 1.5
FFR 525W		--	--	--	--	--	2.0	--	--	--	--	1.0	2 1.5
WAKEFIELD		--	--	--	--	--							
Column Summaries Per Variety													
	IL Flo	IN Laf	Win	MD Bar	MS Sto	NC Fre	OH Del	Spr	TN Jac	Uni	VA Pro	-Summary- # AVG	
CALDWELL	2.0	2.3	2.7	3.1	2.0	3.0	1.7	3.3	1.1	2.3	4.0	19 2.6	
FFR 525W	3.5	2.3	2.7	3.0	1.7	3.2	2.3	3.3	3.0	2.7	3.3	19 3.0	
WAKEFIELD	2.3	3.0	3.0	4.3	2.3	2.3	1.0	2.3	1.6	2.3	2.5	19 2.5	

FFR COOPERATIVE

Wheat Varieties Head-to-Head Comparison for HEIGHT (Inches)

Variety	Test 1988	IL Flo	IN Laf	Win	MD Bar	NC Fre	OH Del	Spr	TN Uni	VA Pro	-Summary- # AVG
CALDWELL	--	--	--	29.7	38.3	--	--	35.3	--	38.7	4 35.5
FFR 525W	--	--	--	28.7	38.7	--	--	35.0	--	39.3	4 35.4
WAKEFIELD	--	--	--	30.3	41.3	--	--	35.3	--	40.3	4 36.8
1989											
CALDWELL	--	--	38.0	--	34.7	--	--	--	38.0	39.0	4 37.4
FFR 525W	--	--	37.0	--	35.7	--	--	--	35.0	38.3	4 36.5
WAKEFIELD	--	--	38.0	--	36.7	--	--	--	36.0	40.3	4 37.8
1990											
CALDWELL	--	--	--	30.0	--	34.7	34.0	--	38.3	34.7	5 34.3
FFR 525W	--	--	--	35.0	--	32.0	35.0	--	34.7	31.7	5 33.7
WAKEFIELD	--	--	--	35.0	--	37.0	38.0	--	38.7	35.0	5 36.7
1991											
CALDWELL	--	--	37.3	--	--	40.7	--	--	--	35.3	3 37.8
FFR 525W	--	--	38.7	--	--	40.0	--	--	--	38.7	3 39.1
WAKEFIELD	--	--	40.7	--	--	38.0	--	--	--	36.3	3 38.3
1992											
CALDWELL	36.0	--	--	--	--	35.3	--	--	--	41.3	3 37.5
FFR 525W	34.5	--	--	--	--	33.3	--	--	--	37.7	3 35.2
WAKEFIELD	37.0	--	--	--	--	38.7	--	--	--	41.0	3 38.9

Column Summaries Per Variety

Variety	IL Flo	IN Laf	Win	MD Bar	NC Fre	OH Del	Spr	TN Uni	VA Pro	-Summary- # AVG
CALDWELL	36.0	37.6	29.9	36.5	36.9	34.0	35.3	38.1	37.8	19 36.3
FFR 525W	34.5	37.9	31.9	37.2	35.1	35.0	35.0	34.9	37.1	19 35.7
WAKEFIELD	37.0	39.4	32.6	39.0	37.9	38.0	35.3	37.4	38.6	19 37.6

9/21/92 (pvp525.txt)

FFR COOPERATIVE

Wheat Varieties Head-to-Head Comparison for WINTER KILL (Percent Killed)

Variety	Test	IL Flo	IN Gre	OH Att	Spr	-Summary- #	AVG
	1988						
CALDWELL		--	--	--	23.3	1	23.3
FFR 525W		--	--	--	33.3	1	33.3
WAKEFIELD		--	--	--	30.0	1	30.0
	1989						
CALDWELL		--	--	--	30.0	1	30.0
FFR 525W		--	--	--	13.3	1	13.3
WAKEFIELD		--	--	--	20.0	1	20.0
	1992						
CALDWELL		20.0	53.0	30.0	--	3	34.3
FFR 525W		47.0	77.0	50.0	--	3	58.0
WAKEFIELD		33.0	77.0	40.0	--	3	50.0

Column Summaries Per Variety

	IL Flo	IN Gre	OH Att	Spr	-Summary- #	AVG
CALDWELL	20.0	53.0	30.0	26.7	5	31.3
FFR 525W	47.0	77.0	50.0	23.3	5	44.1
WAKEFIELD	33.0	77.0	40.0	25.0	5	40.0

9/14/92 (pvp525.txt)

FFR COOPERATIVE

Wheat Varieties Head-to-Head Comparison for SEPTORIA (1 = resistant; 9 = susceptible)

Variety	Test	IL Flo	IN Gre	NC Fre	OH Del	Spr	TN Jac	Uni	VA Pro	-Summary- #	AVG
	1989										
CALDWELL		--	--	--	--	--	2.0	2.0	--	2	2.0
FFR 525W		--	--	--	--	--	3.0	2.7	--	2	2.9
WAKEFIELD		--	--	--	--	--	2.3	2.0	--	2	2.1
	1990										
CALDWELL		--	6.0	--	7.0	5.0	--	--	--	3	6.0
FFR 525W		--	3.0	--	3.0	2.0	--	--	--	3	2.7
WAKEFIELD		--	2.0	--	1.0	1.0	--	--	--	3	1.3
	1991										
CALDWELL		7.0	--	--	--	--	--	--	--	1	7.0
FFR 525W		6.0	--	--	--	--	--	--	--	1	6.0
WAKEFIELD		2.0	--	--	--	--	--	--	--	1	2.0
	1992										
CALDWELL		--	--	5.7	--	--	--	--	7.3	2	6.5
FFR 525W		--	--	6.3	--	--	--	--	6.3	2	6.3
WAKEFIELD		--	--	3.7	--	--	--	--	7.7	2	5.7

Column Summaries Per Variety

	IL Flo	IN Gre	NC Fre	OH Del	Spr	TN Jac	Uni	VA Pro	-Summary- #	AVG
CALDWELL	7.0	6.0	5.7	7.0	5.0	2.0	2.0	7.3	8	5.3
FFR 525W	6.0	3.0	6.3	3.0	2.0	3.0	2.7	6.3	8	4.0
WAKEFIELD	2.0	2.0	3.7	1.0	1.0	2.3	2.0	7.7	8	2.7

9/14/92 (pvp525.txt)

FFR COOPERATIVE

Wheat Varieties Head-to-Head Comparison for LEAF RUST (1 = resistant; 9 = susceptible)

Variety	Test	IL	IN	-Summary-	
		Flo	Gre	#	AVG
	1990				
CALDWELL		--	1.0	1	1.0
FFR 525W		--	3.0	1	3.0
WAKEFIELD		--	3.0	1	3.0
	1991				
CALDWELL		1.0	--	1	1.0
FFR 525W		1.0	--	1	1.0
WAKEFIELD		1.0	--	1	1.0

Column Summaries Per Variety

	IL	IN	-Summary-	
	Flo	Gre	#	AVG
CALDWELL	1.0	1.0	2	1.0
FFR 525W	1.0	3.0	2	2.0
WAKEFIELD	1.0	3.0	2	2.0

9/14/92 (pvp525.txt)

FFR COOPERATIVE

Wheat Varieties Head-to-Head Comparison for P. MILDEW (1 = resistant; 9 = susceptible)

Variety	Test	IN Gre	NC Fre	OH Spr	VA Pro	-Summary- #	AVG
	1988						
CALDWELL		--	--	--	4.7	1	4.7
FFR 525W		--	--	--	8.7	1	8.7
WAKEFIELD		--	--	--	2.0	1	2.0
	1990						
CALDWELL		4.0	--	3.0	6.7	3	4.6
FFR 525W		3.0	--	2.0	9.0	3	4.7
WAKEFIELD		3.0	--	1.0	8.3	3	4.1
	1991						
CALDWELL		--	5.0	--	8.0	2	6.5
FFR 525W		--	8.7	--	8.7	2	8.7
WAKEFIELD		--	7.0	--	7.3	2	7.2
	1992						
CALDWELL		--	--	--	4.3	1	4.3
FFR 525W		--	--	--	8.7	1	8.7
WAKEFIELD		--	--	--	4.7	1	4.7

Column Summaries Per Variety

	IN Gre	NC Fre	OH Spr	VA Pro	-Summary- #	AVG
CALDWELL	4.0	5.0	3.0	5.9	7	5.1
FFR 525W	3.0	8.7	2.0	8.8	7	7.0
WAKEFIELD	3.0	7.0	1.0	5.6	7	4.8

FFR COOPERATIVE

Wheat Varieties Head-to-Head Comparison for G-BLOTCH (1 = resistant; 9 = susceptible)

Variety	Test	IL	IN	OH	-Summary-		
		Flo	Gre	Del	Spr	#	AVG
	1990						
CALDWELL		--	4.0	7.0	3.0	3	4.7
FFR 525W		--	1.0	1.0	1.0	3	1.0
WAKEFIELD		--	3.0	3.0	1.0	3	2.3
	1991						
CALDWELL		6.0	--	--	--	1	6.0
FFR 525W		3.0	--	--	--	1	3.0
WAKEFIELD		5.0	--	--	--	1	5.0

Column Summaries Per Variety

	IL	IN	OH	-Summary-		
	Flo	Gre	Del	Spr	#	AVG
CALDWELL	6.0	4.0	7.0	3.0	4	5.0
FFR 525W	3.0	1.0	1.0	1.0	4	1.5
WAKEFIELD	5.0	3.0	3.0	1.0	4	3.0

ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY

BLACKSBURG, VIRGINIA

FIELD TEST

STANDARD = 819, MASSEY

LAB NO.	ENTRY	MILLING		BAKING		COMB.		MICRO	SOFTNESS EQUIV.	FLOUR YIELD	ASH	FLOUR PROTEIN	MICRO AWRC	COOKIE DIAMETER	TOP GRAIN
		QUALITY SCORE		QUALITY SCORE		QUALITY SCORE		TEST WT. KG./HL							
***	STANDARD	100	A	100	A	100	A	82.3	56.5	71.9	.33	9.5	53.4	17.7	4
***	BENCHMARK	105.4	A	108.9	A	105.4	A	78.6*	61.4	73.6	.35	7.9	52.9	18.2	4
816	VA 82-52-52	97	B	82.5	E	82.5	E	84.2	56.4	70.8*	.32	11.1*	55.1*	17.4*	4
817	SALUDA	99.1	B	80.8	E	80.8	E	85.2	57.5	71.1*	.32	10.6*	55.8*	17.3*	4
818	TYLER	99.5	B	94.8	C	94.8	C	82.8	54.8	72	.33	9.10	54.1	17.6	4
819	MASSEY	100	A	100	A	100	A	82.3	56.5	71.9	.33	9.5	53.4	17.7	4

DATA RANKED ACCORDING TO COMBINED QUALITY SCORE

BLACKSBURG, VIRGINIA

FIELD TEST

LAB NO.	ENTRY	MILLING QUALITY SCORE	BAKING QUALITY SCORE	COMB. QUALITY SCORE	MICRO TEST WT. KG/HL	SOFTNESS EQUIV.	FLOUR YIELD	ASH	FLOUR PROTEIN	MICRO AWRC	COOKIE DIAMETER	TOP GRAIN	
***	BENCHMARK	105.4	A	108.9	A	78.6*	61.4	73.6	.35	7.9	52.9	18.2	4
319	MASSEY	100	A	100	A	82.3	56.5	71.9	.33	9.5	53.4	17.7	4
***	STANDARD	100	A	100	A	82.3	56.5	71.9	.33	9.5	53.4	17.7	4
318	TYLER	99.5	B	94.8	C	82.8	54.8	72	.33	9.10	54.1	17.6	4
316	VA 82-52-52	97	B	82.5	E	84.2	56.4	70.8*	.32	11.1*	55.1*	17.4*	4
317	SALUDA	99.1	B	80.8	E	85.2	57.5	71.1*	.32	10.6*	55.8*	17.3*	4

ADVANCED NURSERY EVALUATION

FOR SOFT WHEAT MILLING AND BAKING QUALITY
1987 CROP

WEST LAFAYETTE, INDIANA

STANDARD = 823, CALDWELL

LAB NO.	ENTRY	MILLING		BAKING		COMB.		MICRO		SOFTNESS EQUIV.	FLOUR YIELD	ASH	FLOUR PROTEIN	MICRO AWRC	COOKIE DIAMETER	TOP GRAIN
		QUALITY SCORE	SCORE	QUALITY SCORE	SCORE	TEST WT. KG.HL	TEST WT. KG.HL									
****	STANDARD	100	A	100	A	100	A	77.1	69.1	70.9	.28	8.60	55	18.2	5	
****	BENCHMARK	97.1	B	99.4	B	97.1	B	78.6	61.4*	73.6	.35*	7.9	52.9	18.2	5	
820	VA 82-52-52	99.2	B	92.9	C	92.9	C	79.5	65.7	70.9	.28	9.39*	55.3	18.1	5	
821	PIONEER 2551	91.1	C	83.7	E	83.7	E	76.6	60.6*	70.5	.32*	9.39*	53.6	17.6*	4	
822	TYLER	97.2	B	79.3	F	79.3	F	81.4	58.2*	71.9	.31	9.7 *	53.4	17.5*	3*	
823	CALDWELL	100	A	100	A	100	A	77.1	69.1	70.9	.28	8.60	55	18.2	5	

DATA RANKED ACCORDING TO COMBINED QUALITY SCORE

WEST LAFAYETTE, INDIANA

LAB NO.	ENTRY	MILLING		BAKING		COMB.		MICRO		SOFTNESS EQUIV.	FLOUR YIELD	ASH	FLOUR PROTEIN	MICRO AWRC	COOKIE DIAMETER	TOP GRAIN
		QUALITY SCORE	QUALITY SCORE	QUALITY SCORE	QUALITY SCORE	TEST WT. KG/HL	TEST WT. KG/HL									
823	CALDWELL	100	A	100	A	100	A	77.1	69.1	70.9	.28	8.60	55	18.2	5	
****	STANDARD	100	A	100	A	100	A	77.1	69.1	70.9	.28	8.60	55	18.2	5	
****	BENCHMARK	97.1	B	99.4	B	97.1	B	78.6	61.4*	73.6	.35*	7.9	52.9	18.2	5	
820	VA 82-52-52	99.2	B	92.9	C	92.9	C	79.5	65.7	70.9	.28	9.39*	55.3	18.1	5	
821	PIONEER 2551	91.1	C	83.7	E	83.7	E	76.6	60.6*	70.5	.32*	9.39*	53.6	17.6*	5	
822	TYLER	97.2	B	79.3	F	79.3	F	81.4	58.2*	71.9	.31	9.7 *	53.4	17.5*	5*	

Exhibit E. Statement of the Basis of Applicant's Ownership

FFR 525W was bred and developed by plant Breeders at Virginia Polytechnic Insititute and State University (VPI) at Blacksburg, Virginia. Under an agreement between FFR cooperative and VPI, exclusive, proprietary rights were granted to FFR in a letter dated September 27, 1987, signed by T. M. Starling and approved by Robert Q. Cannell, Head of the Department of Agronomy.